



Agricultural Resources Conservation Fund (ARCF) 2021 Biennial Report

Submitted to the Tennessee General Assembly

House Agriculture and Natural Resources Committee

Senate Energy, Agriculture and Natural Resources Committee

Improving Tennessee's Soil and Water Quality – One Farm at a Time



February 1, 2021

Table of Contents

Introduction	Page 1
Program Components	Page 2
Program Priorities	Page 2
Financial History	Page 2
Summary of Activities of the ARCF	Page 3
Documented Successes	Page 4
Summary of Expenditures	Page 7
List of Partners	Page 10

List of Figures

Figure 1: Example of Exclusion Fence and Stream Crossing – Fayette County	Page 1
Figure 2: Roof Runoff and Heavy Use Area – Hamblen County	Page 2
Figure 3: Grade Control Structure Before and After – Maury County	Page 3
Figure 4: Map of Tennessee’s Nonpoint Source Success Story Watersheds	Page 4
Figure 5: Terrace Installation – Madison County	Page 4
Figure 6: Before and After Cover Crops - Jackson County	Page 5
Figure 7: Grassed Waterway – Jefferson County	Page 5
Figure 8: Streambank Stabilization; before and after - Franklin County	Page 6

On the Cover (clockwise, starting top left): Prescribed grazing system in Giles County, Alternative livestock watering system and a heavy use area supporting a rotational grazing system in Coffee County, and a winter cover crop in Wilson County.

The Tennessee Department of Agriculture prohibits discrimination against persons based on their race, color, national origin, sex, age or disability. Any person alleging discrimination based on a prohibited basis has a right to file a complaint within 180 days of the alleged discrimination with the Tennessee Department of Agriculture and/or the Tennessee Human Rights Commission. For more information contact Tom Womack, Title VI Coordinator at 615-837-5118.

Introduction

In 1991 the 97th General Assembly established the Agricultural Nonpoint Water Pollution Control Fund [TCA §67-4-409(l)]. The purpose of the Fund was to implement a program for the abatement and prevention of nonpoint source pollution that may be caused by agricultural activities. Revenue for the program is derived from the Recordation Tax on the transfer of real property from which the Ag Nonpoint Fund receives 1.5 cents per \$100 of property value, or from appropriations of the General Assembly. Pursuant to TCA §67-4-409(m)(1)(C), the commissioner of agriculture is required to file a report every odd-numbered year that details the expenditures from this fund.

In 1997, the General Assembly enacted modifications to the Fund, by renaming it the Agricultural Resources Conservation Fund (ARCF), and by focusing the program to fund solutions to nonpoint water pollution from agriculture, to educate the landowners, producers, and managers about activities to eliminate nonpoint source pollution, and to fund projects associated with livestock production that may cause pollution. In FY 2003, the funding status of the program changed from being totally recurring to a mixture of recurring and non-recurring funding. In FY 2008, the funding status changed to totally non-recurring funding. In FY 2010, funding was restored to the original recurring status.

FIGURE 1: EXCLUSION FENCE AND STREAM CROSSING – FAYETTE COUNTY



The ARCF provides funding to landowners in all 95 counties through partnerships with Tennessee's 95 Soil Conservation Districts to install needed Best Management Practices on their lands to lessen the impairment of the waters of Tennessee from excessive soil loss and livestock impacts, and associated pollutant transport. Funds are also available for a wide array of Information and Education projects, to educate landowners, producers and managers about how to best keep their operations from causing degradation of our streams, lakes, and rivers. Grants are also made to

purchase specialty equipment for the promotion of on-farm management activities which lessen soil erosion and impacts from runoff.

It is the responsibility of the Land and Water Stewardship Section within the Department's Administration and Grants Division to administer the ARCF. The ARCF is used by the Department as a programmatic non-federal matching fund for the 319 Nonpoint Source Water Pollution Grant Program, funded through the US Environmental Protection Agency.

Program Components



Activities supported by the ARCF includes:

1. Best Management Practices (BMPs) that control soil erosion from cropland such as terraces, grade stabilization structures, diversions, water and sediment control basins, grassed waterways, field borders, riparian buffers, cover crop incentives and other practices that may be recommended by the United States Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS).
2. BMPs that control and manage animal waste such as structural systems (lagoons, holding ponds), , livestock exclusion systems, rotational grazing systems, alternative watering facilities, and other practices recommended by the USDA-NRCS.
3. Information and Education projects that promote the adoption of agricultural BMPs and create public awareness about such activities, such as field days, workshops, events sponsored by Soil Conservation Districts, on-farm demonstrations and applied research conducted by institutions of higher education, and specialty equipment grants to encourage better management of resources.

FIGURE 2: ROOF RUNOFF AND HEAVY USE AREA - BEFORE (TOP) AND AFTER (BOTTOM) - HAMBLÉN COUNTY

Program Priorities

As stated in TCA §67-4-409 (l), "It is the intent of the general assembly that the highest priority of the agricultural resources conservation fund is to abate and prevent nonpoint source water pollution that may be associated with agricultural production." Further, the statute directs funds "to address point and nonpoint source water quality issues, as well as nuisance problems, including, but not limited to, odor, noise, dust and similar concerns". Therefore, the Department has developed guidelines for the program, to ensure that the BMPs installed across Tennessee will have a positive effect on the water resources of our state.

Financial History

Consistent with the requirements of TCA 67-4-409(m), the following is a summary of expenditures relative to implementation of the Agricultural Resources Conservation Fund. From FY 1992 to FY 2018, over \$84 million dollars have been directed and/or appropriated to this program, and to date, due to the voluntary participation of Tennessee farmers, over 45,000 conservation practices have been installed, positively impacting over 1.2 million acres of farmland and the adjacent and downstream water resources.

Summary of Activities of the ARCF

Fiscal Year	FY 1992-1999	FY 2000-2018	FY 2019	FY 2020
Revenues	\$18,489,629	\$79,377,061	\$7,792,250	\$8,375,522
Expenditures	\$16,767,331	\$67,989,264	\$5,826,598	\$5,546,102
Grants to Soil Conservation Districts	660	1,730	95	95
Grants to Other Qualifying Partners	139	239	6	8
Number of Practices Installed	11,275	33,753	2,109	2,205
Acres Treated/ Stabilized	340,624	1,126,597	66,497	71,630



FIGURE 3 (TOP LEFT): GRADE CONTROL STRUCTURE BEFORE, (TOP RIGHT) AFTER INSTALLATION, (LEFT) DURING RAINFALL, FUNCTIONING AS DESIGNED – MAURY COUNTY

Documented Successes

To date, there have been 41 approved success stories in 39 separate watersheds across Tennessee where water quality has measurably improved due to the implementation of conservation projects funded through the ARCF, along with other conservation programs and partners. Full descriptions of these successes may be found online at:

<https://www.epa.gov/nps/nonpoint-source-success-stories-tennessee>

and

<https://www.tn.gov/agriculture/farms/conservation/nps-success-stories.html>

FIGURE 4: MAP OF TENNESSEE'S NONPOINT SOURCE SUCCESS STORY WATERSHEDS

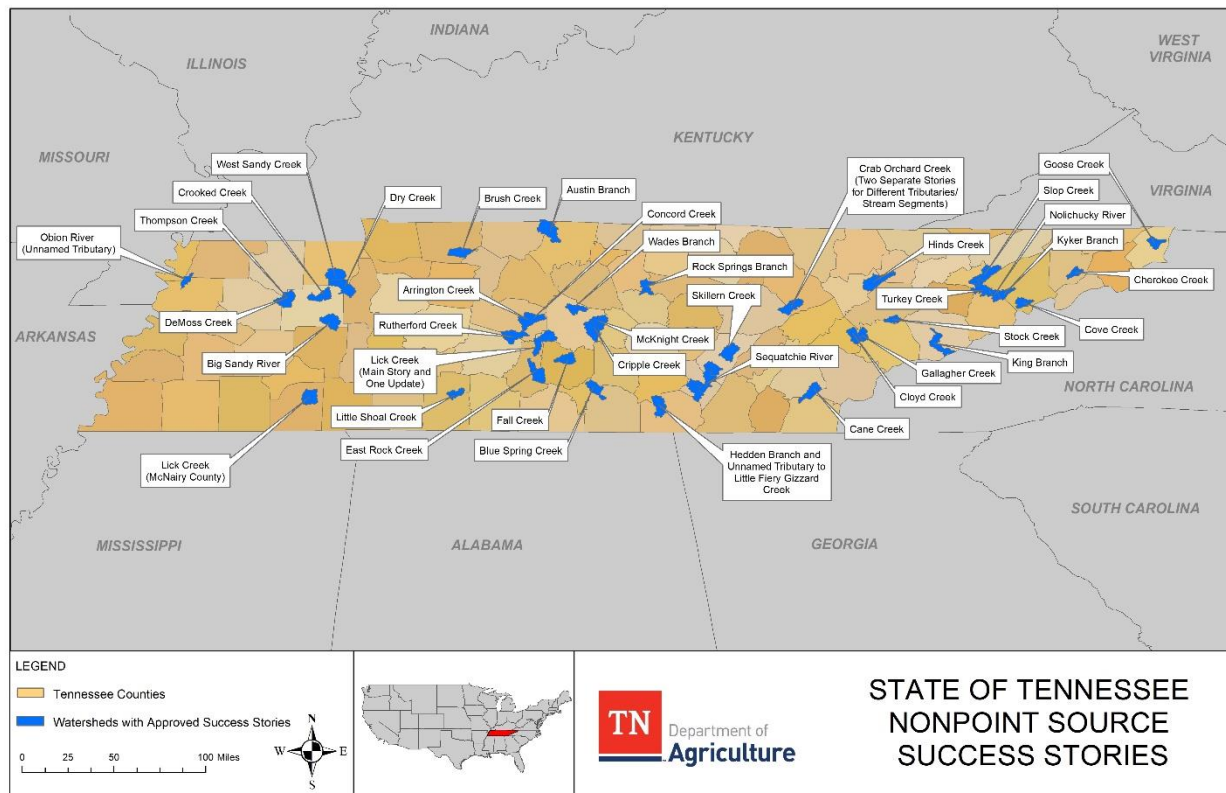


FIGURE 5 (LEFT):
TERRACE INSTALLATION –
MADISON COUNTY



FIGURE 6 : BEFORE (LEFT) AND AFTER (RIGHT) COVER CROPS – JACKSON COUNTY

FIGURE 7:
(RIGHT): 2014 GRASSED
WATERWAY INSTALLATION AND
(BELOW) 2018 SAME LOCATION –
JEFFERSON COUNTY





FIGURE 8: (ABOVE): STREAMBANK STABILIZATION PROJECT BEFORE AND (RIGHT) AFTER INSTALLATION IN 2014 AND (BELOW) STILL FUNCTIONING AS PLANNED, DESIGNED AND CONSTRUCTED IN 2018
— FRANKLIN COUNTY



Summary of Expenditures

The table below is a report of Soil Conservation District expenditures for Fiscal Years 2019 and 2020 for the Agricultural Resources Conservation Fund, including administrative charges and equipment/field day grants.

County SCD	FY 2019		FY 2020		Totals	
	Practices Installed	Expenditures for Practices	Practices Installed	Expenditures for Practices	Total Practices	Total Expenditures (Including Conservation Practices, Administrative Costs, Education and Outreach, etc.)
Anderson	32	\$ 24,882.00	28	\$ 32,985.00	60	\$ 63,657.00
Bedford	29	\$ 91,904.16	64	\$ 128,378.31	93	\$ 227,752.47
Benton	13	\$ 40,354.57	13	\$ 42,505.14	26	\$ 88,919.71
Bledsoe	12	\$ 14,326.50	6	\$ 16,914.20	18	\$ 37,570.70
Blount	34	\$ 53,562.23	32	\$ 41,697.57	66	\$ 102,384.80
Bradley	20	\$ 33,556.78	11	\$ 34,508.14	31	\$ 94,184.92
Campbell	8	\$ 13,257.00	15	\$ 38,216.00	23	\$ 57,383.00
Cannon	12	\$ 28,675.75	27	\$ 59,999.23	39	\$ 95,604.98
Carroll	36	\$ 57,309.44	35	\$ 62,432.35	71	\$ 125,351.79
Carter	4	\$ 6,721.00	2	\$ 32,000.00	6	\$ 44,551.00
Cheatham	31	\$ 49,989.94	22	\$ 49,855.94	53	\$ 129,998.38
Chester	17	\$ 20,077.11	6	\$ 8,553.25	23	\$ 58,980.36
Claiborne	52	\$ 75,301.00	77	\$ 185,707.00	129	\$ 267,698.00
Clay	29	\$ 47,975.06	31	\$ 46,332.97	60	\$ 125,563.55
Cocke	5	\$ 14,300.00	7	\$ 29,738.00	12	\$ 51,028.00
Coffee	50	\$ 111,315.32	96	\$ 172,773.03	146	\$ 297,112.42
Crockett	20	\$ 28,875.31	0	\$ 0.00-	20	\$ 34,185.31
Cumberland	18	\$ 33,496.44	8	\$ 14,625.38	26	\$ 56,501.82
Davidson	16	\$ 32,329.99	0	\$ 0.00	16	\$ 40,789.99
Decatur	14	\$ 11,725.31	24	\$ 30,221.17	38	\$ 47,556.48
DeKalb	16	\$ 14,233.40	17	\$ 37,394.53	33	\$ 58,707.93
Dickson	7	\$ 37,715.84	28	\$ 68,007.71	35	\$ 120,591.05
Dyer	2	\$ 3,239.67	12	\$ 35,121.06	14	\$ 91,240.73
Fayette	38	\$ 101,398.11	44	\$ 125,367.09	82	\$ 233,062.08

County SCD	FY2019		FY2020		Totals	
	Practices Installed	Expenditures for Practices	Practices Installed	Expenditures for Practices	Total Practices	Total Expenditures (Including Conservation Practices, Administrative Costs, Education and Outreach, etc.)
Fentress	40	\$ 58,892.03	51	\$ 92,040.99	91	\$ 74,333.02
Franklin	12	\$ 41,651.03	49	\$ 52,770.71	61	\$ 157,662.95
Gibson	23	\$ 83,445.20	45	\$ 120,687.83	68	\$ 239,243.03
Giles	47	\$ 113,145.54	24	\$ 53,022.70	71	\$ 174,145.49
Grainger	68	\$ 169,145.00	56	\$ 108,986.00	124	\$ 286,711.00
Greene	33	\$ 117,750.00	24	\$ 75,826.00	57	\$ 200,926.00
Grundy	4	\$ 27,212.82	13	\$ 27,701.24	17	\$ 60,254.06
Hamblen	17	\$ 36,895.00	9	\$ 21,594.00	26	\$ 68,579.00
Hamilton	0	\$ 0.00	0	\$ 0.00	0	\$ 6,870.00
Hancock	27	\$ 63,115.63	19	\$ 36,828.00	46	\$ 106,418.83
Hardeman	9	\$ 12,198.96	15	\$ 25,580.80	24	\$ 43,419.76
Hardin	24	\$ 65,372.28	12	\$ 41,250.17	36	\$ 112,352.45
Hawkins	24	\$ 96,895.00	27	\$ 88,204.00	51	\$ 192,522.55
Haywood	17	\$ 27,998.40	22	\$ 25,319.81	39	\$ 58,808.21
Henderson	21	\$ 37,654.14	54	\$ 76,138.01	75	\$ 136,159.15
Henry	45	\$ 100,129.28	16	\$ 51,257.39	61	\$ 87,610.70
Hickman	17	\$ 25,214.67	21	\$ 53,058.87	38	\$ 85,503.54
Houston	6	\$ 17,500.00	7	\$ 10,531.52	13	\$ 35,471.52
Humphreys	18	\$ 50,511.32	20	\$ 49,676.04	38	\$ 108,617.36
Jackson	13	\$ 16,796.89	28	\$ 53,423.79	41	\$ 78,346.82
Jefferson	20	\$ 34,634.00	20	\$ 60,184.00	40	\$ 101,358.00
Johnson	1	\$ 3,000.00	2	\$ 8,837.00	3	\$ 89,553.40
Knox	15	\$ 18,852.00	43	\$ 84,077.00	58	\$ 128,369.00
Lake	10	\$ 10,786.05	6	\$ 12,697.25	16	\$ 28,433.30
Lauderdale	63	\$ 124,363.40	7	\$ 15,337.43	70	\$ 156,225.58
Lawrence	53	\$ 77,793.21	46	\$ 71,369.67	99	\$ 154,322.88
Lewis	4	\$ 5,722.88	3	\$ 2,269.49	7	\$ 14,802.37
Lincoln	19	\$ 29,695.83	20	\$ 47,805.00	39	\$ 84,130.83
Loudon	15	\$ 21,155.63	21	\$ 26,086.97	36	\$ 58,460.10

County SCD	FY2019		FY2020		Totals	
	Practices Installed	Expenditures for Practices	Practices Installed	Expenditures for Practices	Total Practices	Total Expenditures (Including Conservation Practices, Administrative Costs, Education and Outreach, etc.)
Macon	18	\$ 32,454.19	26	\$ 28,935.99	44	\$ 67,420.18
Madison	37	\$ 40,787.55	40	\$ 46,659.66	77	\$ 93,267.21
Marion	0	\$ 2,052.62	8	\$ 17,179.60	8	\$ 25,742.22
Marshall	38	\$ 55,126.61	13	\$ 35,367.01	51	\$ 97,753.62
Maury	53	\$ 101,097.56	27	\$ 53,961.51	80	\$ 162,229.07
McMinn	15	\$ 122,963.06	19	\$ 37,063.42	34	\$ 189,214.23
McNairy	8	\$ 3,466.25	8	\$ 16,145.85	16	\$ 26,302.10
Meigs	9	\$ 14,510.32	15	\$ 41,580.30	24	\$ 86,148.37
Monroe	44	\$ 199,503.00	39	\$ 97,498.00	83	\$ 303,041.00
Montgomery	31	\$ 62,059.97	32	\$ 68,936.47	63	\$ 156,756.44
Moore	2	\$ 11,607.35	11	\$ 29,197.61	13	\$ 70,774.96
Morgan	5	\$ 3,998.00	22	\$ 19,384.14	27	\$ 29,292.14
Obion	41	\$ 110,458.57	43	\$ 83,865.34	84	\$ 213,098.91
Overton	12	\$ 56,170.05	25	\$ 52,516.10	37	\$ 116,066.15
Perry	11	\$ 16,482.16	36	\$ 53,923.51	47	\$ 77,785.67
Pickett	17	\$ 22,067.74	3	\$ 1,610.06	20	\$ 49,467.80
Polk	1	\$ 2,275.00	2	\$ 4,947.67	3	\$ 36,352.67
Putnam	34	\$ 41,916.11	54	\$ 38,764.51	88	\$ 88,147.49
Rhea	0	\$ 0.00	7	\$ 18,415.98	7	\$ 47,855.98
Roane	11	\$ 16,665.82	21	\$ 26,026.30	32	\$ 54,792.12
Robertson	55	\$ 83,169.63	27	\$ 33,289.15	82	\$ 134,713.78
Rutherford	16	\$ 22,931.83	7	\$ 17,925.16	23	\$ 48,056.99
Scott	9	\$ 13,572.51	21	\$ 38,087.42	30	\$ 57,899.93
Sequatchie	5	\$ 6,146.70	7	\$ 17,214.75	12	\$ 31,640.45
Sevier	12	\$ 14,631.00	12	\$ 12,570.00	24	\$ 34,431.00
Shelby	1	\$ 2,835.00	4	\$ 8,157.59	5	\$ 15,522.59

County SCD	FY2019		FY2020		Totals	
	Practices Installed	Expenditures for Practices	Practices Installed	Expenditures for Practices	Total Practices	Total Expenditures (Including Conservation Practices, Administrative Costs, Education and Outreach, etc.)
Smith	62	\$ 86,563.20	44	\$ 57,629.05	106	\$ 51,212.25
Stewart	2	\$ 1,937.17	2	\$ 5,000.00	4	\$ 11,887.17
Sullivan	40	\$ 95,344.86	10	\$ 24,195.00	50	\$ 126,409.86
Sumner	10	\$ 31,448.35	21	\$ 37,587.69	31	\$ 75,617.33
Tipton	56	\$ 117,733.24	69	\$ 126,001.99	125	\$ 276,331.23
Trousdale	13	\$ 13,396.67	9	\$ 5,784.96	22	\$ 25,031.63
Unicoi	0	\$ 0.00	0	\$ 0.00	0	\$ 4,530.00
Union	47	\$ 156,290.00	18	\$ 42,200.00	65	\$ 205,810.00
Van Buren	6	\$ 27,040.05	7	\$ 21,865.33	13	\$ 73,325.38
Warren	23	\$ 56,046.64	35	\$ 46,022.95	58	\$ 132,794.59
Washington	23	\$ 40,427.45	18	\$ 297,906.00	41	\$ 344,963.45
Wayne	54	\$ 71,132.08	51	\$ 67,379.20	105	\$ 145,411.28
Weakley	34	\$ 42,699.91	29	\$ 38,316.63	63	\$ 88,036.54
White	32	\$ 45,580.63	44	\$ 47,213.54	76	\$ 99,994.17
Williamson	14	\$ 29,632.68	4	\$ 13,963.34	18	\$ 72,906.02
Wilson	28	\$ 52,364.48	30	\$ 64,950.58	58	\$ 123,915.06

List of Partners

- Tennessee's 95 Soil Conservation Districts
- US Department of Agriculture, Natural Resources Conservation Service
- County Governments
- State Soil Conservation Committee
- UT Institute of Agriculture
- Tennessee Association of Conservation Districts
- Tennessee Conservation District Employees Association
- Tennessee Department of Environment and Conservation

